

**REMARKS**

This Amendment, submitted in response to the Office Action dated October 15, 2004, is believed to be fully responsive to each point of rejection raised therein. Accordingly, favorable reconsideration on the merits is respectfully requested.

Claims 1-9 and 14-26 are now all the claims pending in the application. Claims 10-13 and 27-30 have been canceled from the present application.

**I. Rejection of claims 1-2 and 14-15 under 35 U.S.C. § 103**

Claims 1-2 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bell (US Patent 5,276,472) in view of Nakamura (US Patent 5,684,262).

Bell describes a film camera capable of recording audio. A digital audio signal is recorded on a magnetic layer formed on a film. At a later time, the digital audio signal is read and converted to binary code and imprinted on a photoprint. See Abstract.

Nakamura describes a karaoke system including a tone converter for converting an inputted voice signal from a microphone into a voice signal having a tone spaced a given pitch from the tone of the inputted voice signal. See Abstract. A voice signal can be converted to three different tones such as a fixed mode, a sound level control mode and a genre-dependent control mode to add effects to a singer's voice. See col. 4, line 65 to col. 5, line 7.

**Claim 1**

The Examiner cites microphone 17 of Bell for teaching “a speech data input unit for inputting speech data associated with said image data for representing speech.” The Examiner states that Bell does not disclose a voice tone convertor as further recited in claim 1, and cites tone convertor 16 of Nakamura to cure the deficiency.

However, the voice tone converter of claim 1, subjects speech data, which is associated with an image, to tone conversion. The speech data of Namakura has no relationship to an image but is purely voice data for a karaoke machine. Consequently, the combination of Nakamura with Bell does not disclose the claimed voice tone convertor which subjects the speech data associated with an image to tone conversion.

Moreover, the tone conversion of Nakamura is not desired in Bell. In particular, Nakamura discloses three modes of tone conversion. A first mode is a fixed mode which converts a supplied digital audio signal into a digital audio signal that is a preset pitch lower than the supplied digital audio signal. See col. 4, line 65 to col. 5, line 1; col. 5, lines 17-19. The second mode is sound level control mode for controlling a tone controller to convert the supplied digital audio signal depending on the level of the voice signal picked up by a microphone. Col. 5, lines 1-4; col. 6, lines 9-16. The third mode is a genre-dependent control mode for controlling the tone controller to convert the supplied digital audio signal depending on the genre of the music piece that is reproduced. See col. 5, lines 4-7. The different modes result in a unison effect of voice data as if two singers were singing although only one singer is singing.

Consequently, the tone conversion performed in Nakamura is not desired in Bell. In particular, a unison effect as if two singers were singing, which is a desired in the karaoke system of Nakamura, is not desired for the photographic film of Bell.

Claim 1 further recites “a speech data output unit for outputting said tone-converted speech data in association with said image data.” The Examiner asserts that printer 43 of Bell teaches the claimed speech data output unit. However, printer 43 merely prints bar code information without regard to tone-conversion. See col. 5, lines 35-44. Further, there is no teaching or suggestion in the Bell reference that printer 43 should be modified to output tone-converted speech data.

Further, tone converter 16 of Nakamura pertains to a karaoke machine and not to a photographic film system as described in Bell. Contrary to the Examiner’s contention, the references are not each related to the same field of endeavor. For instance, at page 21, third full paragraph, the Examiner characterizes Bell in a completely different manner. The references are further not directed to common objects. Where Bell seeks to relate audio and images in a rudimentary way using a simple bar code, Nakamura relates to instrumentation and pitch adjustment. To the extent both references discuss audio processing, their objects differ in a fundamental way such that the processing complexities in Nakamura are wholly inappropriate for the bar scanning of Bell.

Therefore, assuming *arguendo* Nakamura teaches the claimed tone convertor, the combination of Nakamura with Bell is not obvious and is merely a result of impermissible

hindsight. In particular, modifying the photographic film system of Bell to include the tone converter of Nakamura, would require a substantial modification of the principle of operation of Bell.

For at least the above reasons, claim 1 and its dependent claims should be deemed patentable. Since claim 14 recites similar subject matter, claim 14 and its dependent claims should also be deemed patentable. To the extent that independent claims 9, 14, and 26 and their dependent claims recite similar subject matter, they should also be deemed patentable for the same reasons.

## **II. Rejection of claims 3, 9, 16 and 26 under 35 U.S.C. § 103**

Claims 3, 9, 16 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bell (US Patent 5,276,472) in view of Nakamura (US Patent 5,684,262) and Leveque (US Patent 5,495,468).

### **Claims 3 and 16**

Claim 3 recites that “the voice tone convertor generates conversion data for tone conversion control, and sends said conversion data to said speech data output unit.” The Examiner concedes that the combination of Bell and Nakamura does not disclose that the voice tone convertor sends conversion data to a speech data output unit, wherein the tone converted speech includes speech data prior to conversion and the conversion data, and cites Leveque (col. 5, lines 14-17; col. 5, lines 25-29; col. 5, lines 52-55) to cure the deficiency.

Leveque discloses a system for transmitting a plurality of waveforms over a single communications channel using Lincompex. See Field of the Invention. The respective column and lines cited by the Examiner describe the operation of Lincompex compressors which provide compressed voice signals and control tones. Both sets of data comprise data processed in some manner and thus there is no speech data prior to conversion as claimed. Moreover, although the compressed voice signals and control tones are output to a transmission medium, a transmission medium is not the printer 43 (speech data output unit) as originally cited by the Examiner.

Assuming *arguendo*, Leveque teaches conversion data, there is no teaching or suggestion that the conversion data of Leveque should be output to the printer 43 (speech data output unit as cited by the Examiner) of Bell. In particular, it is unclear how the conversion data of Leveque which is transmitted over a communications channel using Lincompex would be printed on printer 43. It appears that the Examiner's reasoning is merely a result of impermissible hindsight.

For at least the above reasons, claim 3 should be deemed patentable. Since claim 16 recites similar elements, it should also be deemed patentable for the same reasons. Since claims 9 and 26 recite similar elements, they should also be deemed patentable for the reasons set forth above with respect to claims 1 and 3.

### **III. Rejection of claims 17-18 under 35 U.S.C. § 103**

Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bell (US Patent 5,276,472) in view of Nakamura (US Patent 5,684,262) and Kinoshita (US Patent

4,983,996). Claims 17 and 18 should be deemed patentable by virtue of their dependency to claim 14 for the reasons set forth above.

In addition, claim 17 recites “an image forming unit for optically printing said image to said recording material, said image forming unit further constituting said speech data recorder optically to print said speech data.” The Examiner states that the combination of Bell and Nakamura does not disclose that the speech data is printed optically and Kinoshita (col. 4, lines 58-63) is cited to cure the deficiency.

However, the respective column and lines of Kinoshita cited by the Examiner describes that the circuit operates to discriminate data consisting of “1” or “0” from a voice memory by every predetermined number of bits and convert them into a corresponding bar code pattern. There is no indication that the speech data is printed optically.

Moreover, the combination of Kinoshita with Nakamura and Bell is not obvious. There is no teaching or suggestion that the photographic film camera of Bell should be modified to optically record speed data. The Examiner’s reasoning appears to merely be a result of impermissible hindsight.

For at least the above reasons, claim 17 and its dependent claims should be deemed patentable.

#### **IV. Rejection of claim 19 under 35 U.S.C. § 103**

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bell (US Patent 5,276,472) in view of Nakamura (US Patent 5,684,262) and Hatada (US Patent 4,270,853).

Claim 19 recites that “the recording material includes a magnetic recording region, and said speech data recorder magnetically records said speech data.” The Examiner states that neither Bell nor Nakamura teaches the elements of claim 19 and cites Hatada to cure the deficiency.

Assuming *arguendo* Hatada teaches the elements of claim 19, Hatada teaches away from Bell. In particular, Hatada discloses an instant-printing film and camera. As discussed in Bell (col. 1, lines 15-42; col. 1, line 65 to col. 2, line 7) the deficiencies of the Hatada reference are identified. In particular, “a problem with the photographic film systems described above is that the magnetic strips, if kept integral with the prints, are limited to use with instant print cameras.” Consequently, Bell teaches away from the cameras disclosed in Hatada. Therefore, the combination of Hatada with Bell and Nakamura is not obvious.

For at least the above reasons, claim 19 should be deemed patentable.

#### V. Rejection of claims 4-7, 20-22 and 24 under 35 U.S.C. § 103

Claims 4-7, 20-22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bell (US Patent 5,276,472) in view of Nakamura (US Patent 5,684,262) and Bernardi (US Patent 5,692,225). Claims 4-7, 20-22 and 24 should be deemed patentable by virtue of their dependency to claims 1 and 14 for the reasons set forth above. Moreover, Bernardi does not cure the deficiencies of Bell and Nakamura.

In addition, as discussed on pages 1-2 of the specification as originally filed, in Bernardi, the speech data associated with the image data is retrieved from a memory card or other

recording medium and is converted to a bar code. In playing back speech data, the bar code is read from a print together with a bar code. However, a shortcoming of the Bernardi reference is that because the speech is original as recorded by a user, it is difficult to understand aurally. Since Bernardi is contrary to the present invention, it is unlikely that one of ordinary skill in the art would combine the Bernardi reference with Bell and Nakamura in order to teach the claimed invention.

**VI. Rejection of claim 23 under 35 U.S.C. § 103**

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bell (US Patent 5,276,472) in view of Nakamura (US Patent 5,684,262), Bernardi (US Patent 5,692,225), and Kinoshita (US Patent 4,983,996).

Claim 23 should be deemed patentable for the reasons set forth above with respect to claim 17. Further, there is no indication in Kinoshita that the text data is optically printed.

**VII. Rejection of claims 8 and 25 under 35 U.S.C. § 103**

Claims 8 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bell (US Patent 5,276,472) in view of Nakamura (US Patent 5,684,262), Bernardi (US Patent 5,692,225) and Spies (US Patent 6,035,273). Claims 8 and 25 should be deemed patentable by virtue of their dependency to claims 1 and 14 for the reasons set forth above. Moreover, Spies does not cure the deficiencies of Bell, Nakamura and Bernardi.

**VIII. Rejection of claims 10-11, 13, 27-28 and 30 under 35 U.S.C. § 103**

Claims 10-11, 13, 27-28 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bell (US Patent 5,276,472) in view of Bernardi (US Patent 5,692,225) and Spies (US Patent 6,035,273). Claims 10-11, 13, 27-28 and 30 have been canceled from the present application to expedite prosecution of this case. Consequently, the rejection of claims 10-11, 13, 27-28 and 30 is now moot.

**IX. Rejection of claims 12 and 29 under 35 U.S.C. § 103**

Claims 12 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bell (US Patent 5,276,472) in view of Bernardi (US Patent 5,692,225). Claims 12 and 29 have been canceled from the present application. Consequently, the rejection of claims 12 and 29 is now moot.

**X. Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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